APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/825,820	04/04/2001	Eric J. Horvitz	MS150904.1	2915

27195   7590   06/04/2008
AMIN, TUROCY & CALVIN, LLP
24TH FLOOR, NATIONAL CITY CENTER
1900 EAST NINTH STREET
CLEVELAND, OH 44114

EXAMINER
SALTARELLI, DOMINIC D

ART UNIT	PAPER NUMBER
2623	

NOTIFICATION DATE	DELIVERY MODE
06/04/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docket1@thepatentattorneys.com
hholmes@thepatentattorneys.com
lpasterchek@thepatentattorneys.com

	Application No.	Applicant(s)
Office Action Summary	09/825,820	HORVITZ ET AL.
	Examiner	Art Unit	
	DOMINIC D. SALTARELLI	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>07 May 2008</u>.
2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-7,9-18,32-34 and 53</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) <u>1-7,9-18,32-34 and 53</u> is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All   b) ☐ Some * c) ☐ None of:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114 was filed in this

application after a decision by the Board of Patent Appeals and Interferences, but

before the filing of a Notice of Appeal to the Court of Appeals for the Federal Circuit or

the commencement of a civil action. Since this application is eligible for continued

examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been

timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution

in this application has been reopened pursuant to 37 CFR 1.114. Applicant's

submission filed on May 7, 2008 has been entered.

Response to Arguments

2.   Applicant's arguments with respect to claims 1-8, 9-18, 32-34, and 53 have been

considered but are moot in view of the new grounds of rejection.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1-7, 9-18, 32-34, and 53 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Maissel et al. (6,637,029, of record) [Maissel] in view of Herz et al.

(5,758,257) [Herz].

        Regarding claims 1, 17, 18, and 53, Maissel discloses a system for

ranking items in a selectable information list received from an information

delivery system (col. 13, lines 35-47), comprising:

        means for logging selections of information viewed by local users of the

information delivery system and temporal history related to a plurality of time

subintervals that correspond to the viewing of the selected information (col. 12,

lines 16-45);

        means for training a plurality of separate collaborative filtering models,

each with information from a corresponding logged temporal history that has

been viewed by the local users and disparate logged temporal history that has

been viewed by a plurality of global users (filtering rules are abstracted from

viewing histories and program characteristics, col. 13, lines 9-34, where the

means for determining said rules is in the manner known in the art, col. 18, lines

8-25, which involves evaluation of collected information from many different

users to evaluate which types of viewing patters represent which types of

preferences);

        means for inferring content preferences associated with a likely subset of

the local users that employs the information delivery system (col. 18 line 45 - col.

19 line 15); and

means for generating the recommendation specific to the inferred, likely subset of the local users based at least in part on the inferred content preferences and information obtained from a plurality of global users (application of said rules, col. 18, lines 8-25, to select recommended programming, col. 13, lines 8-47).

Maissel fails to disclose the means for training a plurality of separate collaborative filtering models utilizes information from a corresponding, respective time subinterval of the logged temporal history that has been viewed by the local users, the means for inferring content preferences associated with a likely subset of the local users that employs the information delivery system uses a particular one of the plurality of time subintervals and utilizes a respective one of the collaborative filtering models corresponding to a target time period to provide a recommendation, and the means for generating the recommendation uses the information obtained from a plurality of global users that related to the particular one of the plurality of time subintervals.

In an analogous art, Herz teaches means for training a plurality of separate collaborative filtering models (col. 7, lines 6-35) utilizing information from a corresponding, respective time subinterval of the logged temporal history that has been viewed by local users (col. 4 line 59 - col. 5 line 22), producing a finer degree of accuracy and relevance of program recommendation (col. 4, lines 15-31).

It would have been obvious at the time to a person of ordinary skill in the art to modify the system of Maissel to include in the means for training a plurality of separate collaborative filtering models, utilizing information from a corresponding, respective time subinterval of the logged temporal history that has been viewed by local users, as taught by Herz, for the benefit of producing a finer degree of accuracy and relevance of program recommendation. Making this combination results in the use of not simply the profile of an individual user for recommending programs, but also takes into account the time of day or week (time subinterval) at which the viewing is to take place.

Regarding claims 2 and 3, Maissel and Herz disclose the system of claim 1, wherein the collaborative filtering system assigns a positive vote to logged selections that are viewed for a dwell time that exceeds a predetermined threshold (col. 4, lines 30-44).

Regarding claims 4 and 5, Maissel and Herz disclose the system of claim 1, wherein the collaborative filtering system assigns a negative vote to logged selections that are viewed briefly and jumped away to another selection (programming which is not viewed for at least a predetermined threshold of time are not included in the new profile information, col. 17, lines 17-44).

Regarding claims 6 and 7, Maissel and Herz disclose the system of claim 1, wherein the viewed information is time stamped by event type (Maissel, col. 17, lines 38-44) and the collaborative filtering system is based on either a single collaborative filtering model or a plurality of separate collaborative filtering models (can be a single, simple data comparison model, or a complex rule based algorithm, Maissel, col. 13, lines 8-24) that are trained (Herz, col. 7, lines 6-35) according to time subintervals intervals that the information has been viewed (Herz, col. 4, lines 59-64).

Regarding claims 9 and 10, Maissel and Herz disclose the system of claim 1, wherein the collaborative filtering system provides in real-time a selectable recommendation list ordered by estimated degree of preference that a user has for each item (Maissel, col. 20, lines 38-44) and receives attributes of at least one user of the system and utilizes these attributes in providing the selectable recommendation list (Maissel, col. 20 line 60 - col. 21 line 3).

Regarding claims 11 and 32-34, Maissel and Herz disclose the system of claims 10 and 18, wherein the collaborative filtering system receives attributes of other systems and utilizes these attributes in providing a globally ranked recommendation list to a cluster of systems based on the temporal viewing history of the systems of the cluster (Maissel, col. 18 line 58 - col. 19 line 15).

Regarding claims 12 and 13, Maissel and Herz disclose the system of claim 9, wherein the collaborative filtering system receives a previously viewed item list that has been filtered by a filtering system (the profile of another person's preferences, Maissel, col. 14 line 54 - col. 15 line 3) and generates a new recommendation according to the preferences provided by the filtered previously viewed item list, the filtering system comprising a popularity filter (Maissel, col. 14 lines 20-24 and 38-46).

Regarding claims 14-16, Maissel and Herz disclose the system of claim 1, further comprising a user interface that allows a user to provide a filter to a reviewed items list (Maissel, col. 12 line 46 - col. 13 line 8, wherein user's are provided with the list of which programs to include or not include as well as general profile information, col. 13, lines 1-7), allowing the user to request a time period for reviewing information from the selectable recommendation list wherein the collaborative filtering system supplies the selections for the time period requested based on the temporal history of selections within a similar time interval covering the time period (Herz, col. 4, lines 59-64) and to modify the reviewed items list, and inputs the modified reviewed items list as updated preferences into the collaborative filtering system, such that a new recommendation list can be generated based on the updated preferences (Herz, col. 7, lines 6-35).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DOMINIC D. SALTARELLI whose telephone number is (571)272-7302. The examiner can normally be reached on Monday - Friday 9:00am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dominic D Saltarelli/
Examiner, Art Unit 2623